



CONSTRUCTION, EXCAVATION, & HAZARDOUS WASTE MANAGEMENT

DFC Environmental Management System

1.0 Purpose

This procedure describes the steps to be taken from when a material is designated to be disposed. This includes the waste streams generated for remodeling/building demolition that are not recyclable, due to volume, purity, and economic factors. Disposal of excavated soil is included in this procedure.

2.0 Activity/Department

The following activities/project types/groups are the most likely users of this procedure:

- Construction activities that generate the majority of the volume of the construction/demolition wastes
- Property Management and Environmental Programs Group activities that generate the majority of soil for disposal

3.0 Forms Used

Waste Manifests – Provided by the disposal facility, or recycler.

4.0 References

Colorado Hazardous Waste Commission Regulations 6 CCR 1007-3

GSA EMS Procedures:

- Pre-demolition Inspection
- Excavation Permit Procedure
- Grounds Maintenance and Chemical Use
- Asbestos Management Plan
- Construction Waste Flowchart

5.0 Acronyms, Abbreviations, and Definitions

Asbestos Containing Materials (ACM) – Materials which contain asbestos at concentrations > 1% for building materials.

Asbestos contaminated soil - Any soil that has a detectable level of ACM

Construction Waste/Debris - Includes but not limited to demolition debris, paint scrapping, removal of parts of building, and remodeling debris.



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Contractor – This is the individual that will be performing the work and is responsible for disposal of the waste following these procedures.

Excavation Soils – Soils excavated from the ground.

EPG – Environmental Programs Group

GSA Project Manager - This includes GSA employee responsible for the work or contract Project Manager (PM) who represent GSA in overseeing construction projects. The PM is ultimately responsible for assuring compliance with this procedure.

Toxic Characteristic Leaching Procedure (TCLP) – see 40 CFR 261.24, Table 1 for details on the analysis.

Waste – Materials which have been determined to have no other beneficial use for example demolition debris without any other use. **Material that is going to be recycled is not a waste.** If a brick or concrete building has been abated for asbestos, the lead or chrome containing paint has been removed, and the building is going to be demolished and the rubble is going to be crushed for aggregate for latter use. This is not a waste.

6.0 Exclusions

None

7.0 Procedure

This procedure is divided up into three major divisions with minor subdivisions:

- Remodeling/demolition wastes
 - Debris
 - Painted surfaces with lead, chrome, other heavy metals
 - Asbestos
- Excavated Soils
- Sampling and Manifesting

It is GSA's intent to recycle all materials, when it makes economic sense.

All above described wastes leaving the facility are required to be transferred to the landfill or an appropriate facility under a waste manifest. All recycled materials leaving the facility are required to be manifested before transfer off the



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facility. Construction debris, with no known hazardous component shall be manifested as non-hazardous. For materials which have the potential to be hazardous, a TCLP analysis shall be performed (See Sampling and Manifesting Procedure). If the results exceed criteria, the wastes shall be shipped under a hazardous waste manifest **All manifests for the DFC shall be signed by a designated signatory within the EPG.** An exception to this requirement is the asbestos manifests.

7.1 Remodeling/demolition wastes

The remodeling/demolition wastes debris is being broken down into three major categories:

- General Construction Waste Disposal – Hazardous and Non-Hazardous
- Paint Abatement
- Asbestos Containing Material (ACM) Disposal

The *Pre-demolition Inspection report* and *Asbestos Management Procedure* will have identified the potential type of waste streams identified in the building to be remodeled/demolished. Based on this information and the contractors' knowledge of the work to be performed, the type and volume of each waste that will be generated should be reviewed. Then, the procedure for debris/waste disposal, or recycling is followed. Most demolition material is not hazardous.

Even though the *Pre-demolition Inspection report* may not identify that a waste stream would be a hazardous waste, the contractor shall notify the CO/COR and the EPG if hazardous waste is suspected. In this case, the material shall be tested for disposal.

When the contractor is choosing what material they are going to test, they should consider the debris that is generated (e.g., a 4" solid wooden wall painted on both sides). A representative sample of the total waste should be collected (e.g., core of the wall with the two painted surfaces. Though the paint itself may fail the TCLP values and be classified as hazardous waste, the analysis is of the entire wall sample may pass and not be classified as hazardous waste. The sample of the entire wall is more representative of the waste as a whole than the painted surface and is allowed by regulation.)

Another example is paint chips from a metal gutter which may fail TCLP for chrome but a billet of the painted metal gutter may pass. Conversely, a waste that contains a very high concentration of a hazardous material that makes up a very small quantity of the total waste volume may cause the entire waste volume to be



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classified as hazardous for proper disposal. Hazardous waste has drastic cost impacts on your project, with disposal costs going from \$17 dollars a yard to upwards of \$300 dollars a yard. The contractor and PM should consider characterizing the waste streams prior to the start of a project.

The Contractor shall segregate materials that are known to be hazardous waste(s) from other construction debris when practical.

General Construction Waste Disposal – Non-hazardous waste

This includes all construction wastes not specifically covered under one of the other described categories. This waste has been tested by TCLP analysis and shown to be non-hazardous, or, based on the contractors knowledge of these materials, is known to be a non-hazardous waste.

The amount and type of general construction waste generated by the demolition activity should be reviewed prior to the initiation of the project. The contractor should review the different types and volume of materials to determine if recycling is an economically viable option. If the cost difference between recycling and disposal is close, the contractor will provide the GSA PM information for determining the disposal option. Based on this determination, materials will either be recycled or sent to a landfill, which is licensed to accept these types of materials. In general, construction debris can be shipped to a solid waste landfill. Some landfills have specially designated monofills for construction debris.

General Construction Waste Disposal – Hazardous waste

This includes all construction wastes, which have been tested using TCLP analysis and shown to be hazardous, or based on the contractors knowledge of these materials is known to be a hazardous waste.

The GSA PM shall contact the EPG for assistance. This material will require special storage, labeling, and disposal requirements. The contractor has 90 days from generation to dispose of the waste at a licensed hazardous waste disposal facility.

Paint Abatement

If the contractor is required to remove paint, and based on the review of the *Pre-*



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demolition Inspection report the paint may contain lead, chromium, or other regulated compounds, then the contractor shall test the paint (TCLP) for disposal. If a paint remover is used, the MSDS for the product should be reviewed to see if it contains a hazardous material which may contribute to a hazardous waste designation of the removed paint and remover. Alternative products should be reviewed to find non-hazardous removal products.

A typical example of paint abatement is disposal of lead or chromium containing paint from windows that are not being replaced (e.g., historic preservation projects).

The GSA PM shall contact the EPG for assistance. This material will require special storage, labeling, and disposal requirements. The contractor has 90 days from generation to dispose of the waste at a hazardous waste disposal facility.

Asbestos Containing Material Disposal

Based on the review of the *Pre-demolition Inspection report* and *Asbestos Management Procedure*, and any other sampling information pertaining to asbestos, the asbestos removal contractor shall remove this material in compliance with Colorado Department of Public Health and Environment 5CCR 1001, Regulation 8, Part B.

ACM waste shall be properly bagged/containerized and labeled per the regulations. The ACM shall be manifested with manifests signed by the GSA PM or GSA employee directly responsible for oversight of the work as the representative of the owner. The contractor **shall not** sign the manifest on behalf of GSA. The wastes shall be sent to a licensed landfill permitted to accept this material. The landfill will send the customer copy to the GSA PM, indicating receipt of the waste. The GSA PM is responsible for assuring that manifests are maintained in the project files. This is critical to prevent fines for illegal disposal of ACM waste. An additional copy of the manifest shall be provided to the EPG

7.2 Excavated Soils

The handling of excavated soils is covered under the *Excavation Permit Procedure*. *Any soils, which contain ACM, must be disposed as asbestos containing soil and require specific procedure, which are negotiated with the CDPHE Solid Waste division on a project-by-project basis.*



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7.3 Sampling and Manifesting

The following section describes the general sampling procedure for TCLP sampling and characterization of waste streams along with waste profiling and manifesting requirements.

- If the Contractor suspects the material may be hazardous they shall collect a representative sample from the roll-off for analysis or pre-demolition sampling.
 - Contact the disposal facility for testing requirements. The sample shall be sent/delivered to a laboratory for TCLP analysis.. This shall be for the full prescribed suite, unless knowledge exists that only metals are suspected, and then a limited suit of RCRA 8 metals will be run. Additional analytical testing other than TCLP may be required by the landfill, depending on the material. These may include the testing for hazardous characteristics (corrosives, reactivity, explosively) and paint filter test for free liquids.
 - The analytical results shall be transmitted to GSA, and if determined hazardous, to the identified disposal landfill along with the profile sheet. The Contractor shall fill out the waste profile sheet and present it to the GSA's CO/COR and have the appropriate EPG personnel sign the profile. The Contractor shall submit the profile to the disposal facility for approval. A charge will occur to review the profile.
 - The disposal facility shall issue the manifest forms based on the Contractor's provided profile and analytical information.
 - The GSA's personnel from the Environmental Programs Group (EPG) will sign the manifest. When the Contractor brings the manifest for signature, she/he shall also bring a copy of the TCLP results and the waste profile sheet. **The manifest will not be signed without this information. Any cost incurred because the information is not provided is the responsibility of the contractor.**
 - The Contractor shall then have the transfer truck driver sign the manifest and give the CO/COR the signed "contractors copy" along with a copy of the TCLP results and submitted profile. The original carbon copy of the manifest will be given to the GSA's EPG representative. The GSA PM will be responsible for putting copies into the



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project files. The EPG representative may inspect the waste hauler. Based on this inspection which is guided by DOT regulations, the EPG representative may not release the manifest to the truck driver. Any cost incurred because of GSA's refusal to allow the waste to be picked up is the responsibility of the contractor.

The GSA PM shall contact the EPG for assistance. This material will require special storage, labeling, and disposal requirements. EPG will assist in guiding through the disposal effort.

- If the Contractor has ACM, they shall manifest the waste.
- The disposal facility shall issue the manifest forms based on the Contractor's provided information.
- ACM manifests will be signed by the GSA PM or GSA employee directly responsible for oversight of the work as the representative of the owner.
- The contractor **shall not** sign the manifest on behalf of GSA
- The Contractor shall then have the transfer truck driver sign the manifest and shall give the GSA the signed "contractors copy".
- The landfill will send the customer copy indicating receipt of the waste to the GSA PM who is responsible to assure that it gets into the project files. This is critical to prevent fines for illegally disposing of ACM waste.
- Copies of both the contractor's copy and the customer copy of the manifest shall be provided to the EPG.
- If the Contractor has no knowledge that the material is non-hazardous then it shall be manifested as non-hazardous building debris. The Contractor shall follow the outlined procedure below.
- The disposal facility shall be contacted and manifests requested the manifest forms filled out based on the Contractor's provided profile
- The GSA's designated personnel from EPG will sign the manifest.
- The Contractor shall then have the transfer truck driver sign the manifest and shall give the EPG the signed "contractors copy".

The original signed manifest by the landfill shall be provided to the EPG.



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8.0 Records

Waste profile sheets

Waste manifests

Non-hazardous Waste Manifests— copies shall be kept in the associated project files and with the EPG. This includes any analytical data which supports the waste designation.

Hazardous Waste Manifests - copies shall be kept in the associated project files and originals will be kept in the EPG Hazardous Waste Files. This includes any analytical data which supports the waste designation.

Asbestos Waste Manifests - copies shall be kept in the associated project files and with the EPG.